CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 89-040

REQUIRING RICHMOND SANITARY SERVICE, WEST CONTRA COSTA SANITARY LANDFILL RICHMOND, CONTRA COSTA COUNTY TO CEASE AND DESIST THE DISCHARGE AND THREATENED DISCHARGE OF WASTE IN VIOLATION OF THE TOXIC PITS CLEANUP ACT OF 1984.

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board) finds that:

1. Richmond Sanitary Service, (hereinafter called the discharger) owns and operates the West Contra Costa Sanitary Landfill, located on 350 acres at the foot of Parr Blvd. in Richmond, Contra Costa County. The site consists of both Class I and Class II waste management units. The 28 acre Class I waste management unit consists of a 9.5 acre hazardous waste surface impoundment, a 11.5 acre hazardous waste landfill, a 5 acre retention pond and a 2 acre runoff collection system. The subject of this Order is the Class I surface impoundment. The site is shown on Figure 1 which is incorporated herein and made a part of this Order.

2. The surface impoundment was constructed in the mid-1950's and received liquid hazardous waste until 1983. The hazardous waste surface impoundment contains approximately 45,000 cubic yards of sludge sediment with concentrations of up to 13,000 part per million (ppm) gasoline, 31 ppm benzene, 710 ppm toluene, 410 ppm ethylbenzene, 160 ppm chlorobenzene 180 ppm 1,2 dichlorobenzene, 400 ppm 1,1,1, trichloroethane, 550 ppm trichloroethylene, 530 ppm perchloroethylene, 4,600 ppm chromium, 1,400 ppm copper, 1,700 ppm lead, 5,000 ppm nickel, and 4,000 ppm of zinc.

3. The site is underlain by 50 to more than 70 feet of clayey sediments called Younger Bay Mud. Interbedded within the Younger Bay Mud are 0.5 to 15 foot thick lenses and layers of sand and silty to clayey sand. Some of the fine grained sand and silt deposits resulted from floods and appear to blanket substantial areas of the site. A smaller portion of the sandy deposits originated from fills and as stream and estuarine channel deposits.

4. The groundwater flow beneath the site has been classified into four water bearing zones: surficial, shallow, medium, and deep zones. Within the site, much of the surficial zone includes refuse, fill, and very recent flood deposits. The surficial zone is the primary contaminant pathway. The potential beneficial uses of ground water in the deep zone, which is deeper than -60 feet MSL, are domestic, municipal, agricultural, and industrial process and service supply. At a minimum, the surficial and shallow water bearing zones discharge to San Pablo Bay and wetlands surrounding the site.

5. In 1986, the discharger installed a soil attapulgite slurry wall around the perimeter of the Class I waste management unit. A previously constructed Bay Mud barrier wall was found to be inadequate and groundwater contamination was detected in surficial zone wells beyond the perimeter of the Class I waste management unit. The slurry wall was constructed to prevent migration of contaminants through the sand surficial layer from the Class I unit.

6. In 1987, the discharger installed a second soil attapulgite slurry wall which encapsulated the contaminated groundwater from the perimeter of the Class I unit to the boundary of San Pablo Creek referred to as the E-22R area on Figure 1.

7. The hazardous waste surface impoundment is subject to the Toxic Pits Cleanup Act (TPCA) because it contains hazardous wastes and free liquids. The pond is not within one-half mile of a potential drinking water source. TPCA requires that such ponds not be used for storage of hazardous wastes containing free liquids after January 1, 1989. The discharger has not met the TPCA deadline for ceasing discharge due to difficulties and delays associated with the development of an adequate closure plan.

8. The discharger submitted a Preliminary Closure Plan and Post Closure Plan pursuant to the Resource Conservation and Recovery Act (RCRA) on November 10, 1988. This report identified studies the discharger has initiated to implement final closure of the Class I unit. The investigations have included studies to determine the stability and potential deformation of the site, the potential of vertical containment, the long-term integrity of the soil attapulgite slurry wall, potential designs for a leachate collection removal system, and the final cover design. In addition, the discharger is investigating methods to solidify and chemically stabilize the residual sludge in the surface impoundment.

9. On November 4, 1988, the discharger submitted a Workplan for Sludge Solidification/Stabilization at the Class I Surface Impoundment. The workplan proposed activities to determine the method to solidify the hazardous waste sludge to remove free liquids, to provide sufficient strength to withstand the overlying final closure design materials, and to minimize future leaching of contaminants from the solidified sludge. The workplan was approved with a time schedule for implementation of the studies.

10. On August 26, 1988, Cleanup and Abatement Order (CAO) No. 88-137 was issued to the discharger. The CAO required the discharger to remove large pieces of construction debris from the Class I surface impoundment to facilitate the solidification process. The CAO was revised by a September 13, 1988 letter which required the discharger to survey the location of the debris and stipulated that the debris would have to be removed prior to solidification, unless it had been demonstrated that the debris could be used for backfill of the Class I surface impoundment.

11. The beneficial uses of San Pablo Bay in the vicinity of the site are:

    a. Industrial service supply
    b. Navigation
    c. Contact and non-contact water recreation
    d. Commercial and sport fishing
    e. Wildlife and estuarine habitat
    f. Preservation of rare and endangered species
    g. Fish migration and spawning
    h. Shellfish harvesting

12. The beneficial uses of San Pablo Creek in the vicinity of the site are:
    a. Non-contact Water Recreation
    b. Warm Fresh Water Habitat
    c. Wildlife Habitat
    d. Fish migration and spawning

13. This Order is a regulatory enforcement action, exempt from the provisions of the California Environmental quality Act (Public Resources Code Section 21000, et seq.) in accordance with Section 15321, Chapter 3, Title 14 of the California Code of Regulations.

14. The Board has notified the discharger and interested agencies and persons of its intent to issue this Order and has provided them with the opportunity for a public hearing and to submit their written views and recommendations.

15. The Board, in a public hearing, heard and considered all comments pertaining to this matter.

IT IS HEREBY ORDERED, pursuant to Section 13301 of the California Water Code, that Richmond Sanitary Service, Cease and Desist from violating the Toxic Pits Cleanup Act of 1984, as follows:

1. The discharger shall Cease Discharge according to the following tasks and timeschedule:

    a. The discharger shall submit a technical memorandum acceptable to the Executive Officer which includes results from studies conducted to determine the leachability and compatibility of solidified sludge using the preferred sludge solidification/stabilization methods. The memorandum shall demonstrate that the preferred solidification/stabilization method will minimize future leaching from the solidified sludge.
    REPORT DUE: May 15, 1989

    b. The discharger shall submit a technical report acceptable to the Executive Officer which outlines the proposed construction method to solidify and stabilize the sludge.
    PRECONSTRUCTION REPORT DUE: March 31, 1989

c. The discharger shall submit a technical report acceptable to the Executive Officer which includes the construction specifications and the confirmatory testing protocol prepared for the sludge solidification and stabilization process.
REPORT DUE: April 15, 1989

d. The discharger shall submit a technical report acceptable to the Executive Officer which shall include (1) a proposal to remove construction debris from the surveyed area prior to solidification and (2) a technical evaluation of the adequacy of using debris as backfill material above the solidified sludge.
REPORT DUE: May 15, 1989

e. The discharger shall begin implementation of the sludge solidification/stabilization process according to the plan submitted for 1.c(Construction Specifications) as approved by the Executive Officer.
IMPLEMENTATION DATE: June 1, 1989

f. The discharger shall be in compliance with the TPCA Cease Discharge requirement. The surface impoundment shall not contain free liquids or hazardous wastes containing free liquids.
COMPLIANCE DATE: October 1, 1989

g. The discharger shall submit a technical report acceptable to the Executive Officer documenting compliance with the TPCA Cease Discharge requirement.
REPORT DUE: November 15, 1989

2. The discharger shall conduct investigations in order to design a closure plan for the hazardous waste management unit which is acceptable to the Executive Officer according to the tasks and time schedule as follows:

a. The discharger shall submit a technical report acceptable to the Executive Officer which analyzes the stability and predicts deformation of the hazardous waste waste management unit and the underlying soils. The report shall also analyze the liquefaction potential of the waste management unit. If the analysis indicates that corrective actions are needed to prevent potential static or seismic deformation or other damage due to rapid geologic change, a proposal for corrective actions shall be included in the closure plan. The closure plan shall also contain a contingency plan which includes specific inspections and corrective actions that shall be taken in the future when potential instability or deformation occurs which impacts or threatens to impact water quality.
REPORT DUE: March 17, 1989

b. The discharger shall submit a technical report acceptable to the Executive officer which provides the final cover evaluation for the waste management unit. The report shall include technical substantiation for the recommended cover system.
REPORT DUE: March 30, 1989

c. The discharger shall submit a technical report acceptable to the Executive Officer which details the interim leachate collection and removal system (LCRS) design that shall be installed as part of solidification. The interim LCRS shall be designed to prevent seepage from the waste management unit during solidification activities. The report shall also address the ways in which the interim LCRS will operate as a large scale field test for the design of the final LCRS that shall be installed as part of final closure.
REPORT DUE: April 15, 1989

d. The discharger shall submit a technical report acceptable to the Executive Officer which demonstrates the integrity of the soil attapulgite slurry wall and confirms the slurry wall's design performance standards which provide for long term horizontal containment of the hazardous waste management unit. The report shall include a proposal for long term monitoring and reporting to verify the effective performance of the slurry wall. The results of the leachate column tests shall be submitted with the closure plan.
REPORT DUE: May 3, 1989

e. The discharger shall submit a technical report acceptable to the Executive Officer which demonstrates that the geologic materials beneath the hazardous waste management unit provide vertical containment to prevent contamination of the underlying groundwater beneath the surficial groundwater zone. The report shall also include an analysis demonstrating vertical containment is adequate in the presence of the waste management unit's leachate. If the report demonstrates that there is not vertical containment at the site, the report shall include a proposal to prevent vertical migration of contaminants to the shallow, medium, and deep groundwater bearing zones. The results of the leachate column tests shall be submitted with the closure plan.
REPORT DUE: May 26, 1989

f. The discharger shall submit a closure plan acceptable to Executive Officer for the hazardous waste management unit. The closure plan shall include the detailed design of the leachate collection removal and treatment system and the gas control and monitoring system.
REPORT DUE: September 30, 1989

3. If the discharger is delayed, interrupted or prevented from meeting one or more of the time schedules in this Order due to circumstances beyond his control, the discharger shall promptly notify the Executive Officer. In the event of such delays, the Board will consider modification of the time schedules established in this Order.

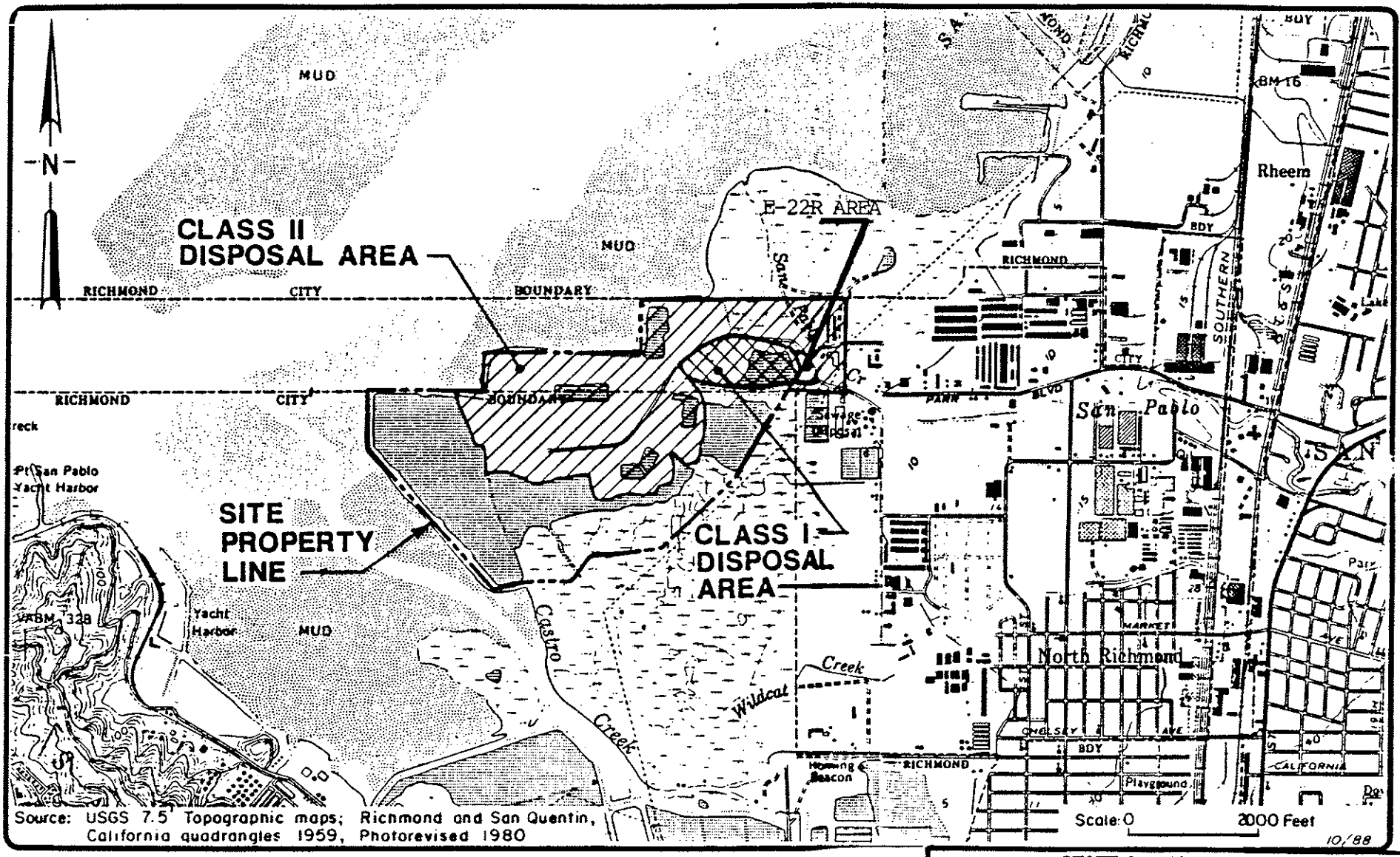
4. If the Executive Officer finds that the discharger has failed to comply with the provisions of this Order, he is authorized after approval of the Board Chairman, to request the Attorney General to take appropriate action against the discharger, including injunction and civil remedies, if appropriate, or to issue a Complaint for Board consideration of Administrative Civil Liabilities.

I, Steven R. Ritchie, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an order adopted by the California Regional Water Quality Board, San Francisco Bay Region, on March 15, 1989.

Steven R. Ritchie
Executive Officer

Attachments:
Figure 1: Site Map

119014



Source: USGS 7.5' Topographic maps; Richmond and San Quentin, California quadrangles 1959, Photorevised 1980

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RICHMOND SANITARY SERVICE
WEST CONTRA COSTA SANITARY LANDFILL
LOCATION MAP

FIGURE 1